1 **CLAIMS** 2 3 I claim: 4 5 A system for providing visual orientation information to a user, comprising: 6 orientation sensing means for providing positional change information of a user with respect to a baseline position; 8 data acquisition means to acquire said positional change information and said baseline 9 position from said orientation sensing means; data processing means for determination of a relative positional change of said user from 10 **Ç**[11 said baseline position, based upon said positional change information and said baseline position []12 [] acquired by said data acquisition means; and []13 display means for presenting to said user a set of visual cues indicative of said relative n <u>7</u>714 positional change. **_**15 2. The system of Claim 1 wherein said orientation sensing means comprises an accelerometer. 3. The system of Claim 1 wherein said orientation sensing means comprises a magnetostrictive sensor. 19 20 4. The system of Claim 1 wherein said orientation sensing means comprises a gyroscope. 21 22 5. The system of Claim 1 wherein said orientation sensing means is worn by said user on a band 23 affixed to the head of said user. 24

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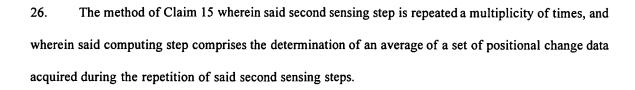
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The system of Claim 1 wherein said display means is affixed to a pair of eye glasses.

1	7.	The system of Claim 1 wherein said display means comprises a liquid crystal display.
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3	8.	The system of Claim 1 wherein said display means comprises a retinal scanner.
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5	9.	The system of Claim 1 wherein said display means comprises the projection of a series of averaged
6	video	images acquired by a camera.
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8	10.	The system of Claim 1 wherein said display means comprises a holographic projection.
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	711.	The system of Claim 1 wherein said visual cues comprise pitch information.
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712 12	12.	The system of Claim 1 wherein said visual cues comprise roll information.
(1) (1) (1) (1) (1)		
(†14	13.	The system of Claim 1 wherein said visual cues comprise yaw information.
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(m 15 15 mm 16 mm 16 mm 17 17 mm 17 17 mm 17 17 mm 17 17 18 18	14.	The system of Claim wherein said visual cues comprise elevation information.
17 13		
¹ 18	15.	A method of providing physical orientation information to a user comprising the following steps:
19		a. first sensing a baseline position of said user;
20		b. second sensing a positional change from said baseline position;
21		c. computing a relative amount of said positional change from said base line position; and
22		d. presenting said relative amount of said positional change as a series of visual cues to
23		said user.
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25	16.	The system of Claim 15 wherein said sensing steps comprise the use of an accelerometer.
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1	17. The method of Claim 15 wherein said sensing steps comprise the use of a magnetostrictive sensor		
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3	18. The method of Claim 15 wherein said sensing steps comprise the use of a gyroscope.		
4			
5	19. The method of Claim 15 wherein said presenting step comprises providing non-orientation		
6	information to said user.		
7			
8	20. The method of Claim 15 wherein said second sensing step comprises sensing a change in said		
9	user's pitch.		
10 5 511	21. The method of Claim 15 wherein said second sensing step comprises sensing a change in said		
1011 1012 1012 1013 1013	user's roll.		
1::14	22. The method of Claim 15 wherein said second sensing step comprises sensing a change in said		
15	user's yaw.		
14 17	23. The method of Claim 15 wherein said second sensing step comprises sensing a change in said		
الم الم	user's elevation.		
19			
20	24. The system of Claim 15 wherein said presenting step comprises provision of a holographic image		
21	to said user.		
22			
23	25. The method of Claim 15 wherein said presenting step comprises provision of a retinal scanning		
24	image to said user.		
25			



- 27. The method of Claim 26 wherein said repetition of said second sensing step occurs at a rate of more than 10 times per second.
- 28. The method of Claim 15 wherein said presenting step occurs at a rate of more than 6 times per second.
- 29. The method of Claim 15 further including the continuous repetition of steps b, c and d.

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A system for providing visual orientation information to a user, comprising:

orientation sensing means for providing positional change information of an object with respect to a baseline position;

data acquisition means to acquire said positional change information and said baseline position from said orientation sensing means;

data processing means for determination of a relative positional change of said object from said baseline position, based upon said positional change information and said baseline position acquired by said data acquisition means; and

display means for presenting to said user a set of visual cues indicative of said relative positional change.